

CLAIMS

What is claimed is:

- 5 1. A deployment device for deploying a material into a patient, said deployment device comprising:
a housing; and
placement means having a retracted condition within said housing for holding a material, in a collapsed condition, within said housing and an
10 extended condition from said housing for disposing and releasing the material at a predetermined site in an uncollapsed condition.
2. The device according to claim 1, wherein said housing includes an insertion end and an opposite end.
3. The device according to claim 2, wherein said housing includes a
15 lumen connecting said insertion end and said opposite end.
4. The device according to claim 3, wherein said placement means is disposed in said insertion end of said housing and through said lumen.
5. The device according to claim 1, wherein said placement means includes controlling means for controlling the movement of said device.
- 20 6. The device according to claim 5, wherein said controlling means are finger loops.
7. The device according to claim 1, wherein said placement means includes holding means for holding the material on the placement means.
8. The device according to claim 7, wherein said holding means
25 include curvate, radially, outwardly extending arms.
9. The device according to claim 8, wherein said holding means comprises an umbrella shaped wire.
10. The device according to claim 7, wherein said holding means further includes spires attached to ends of said holding means, said spires holding
30 the material in place.
11. The device according to claim 1, wherein said placement means includes a self-expanding ring.
12. The device according to claim 11, wherein said ring is formed as a

13. The device according to claim 11, wherein said ring includes gripping means for maintaining the material on said ring.

14. The device according to claim 13, wherein said gripping means are sutures.

15. The device according to claim 14, wherein said sutures are formed of a material selected from the group consisting essentially of 8-0 prolene, 7-0 prolene, 4-0 nylon sutures.

16. The device according to claim 13, wherein said gripping means is at least one wire.

17. The device according to claim 16, wherein said wire further includes a needle for threading said wire through the material.

18. The device according to claim 17, wherein said wire is a thin flexible wire.

19. The device according to claim 18, wherein said wire is formed of a shape memory alloy.

20. The device according to claim 11, wherein said ring is formed of a shape memory alloy.

21. The device according to claim 20, wherein said shape memory alloy is selected from the group consisting essentially of nitinol and elgiloy, copper- aluminum- nickel, copper-zinc-aluminum and iron-manganese-silicon alloys.

22. The device according to claim 1, wherein said device is sized to fit within a trocar.

23. A method of deploying a material into a patient by:
actuating the placement means of claim 1 to an extended condition and affixing a material to the extended placement device;
retracting the placement device into the housing with the material in a collapsed condition;
inserting the deploying device into the body of a patient;
extending the placement device into the extended condition in the body; and
placing the material at a predetermined site in the uncollapsed

24. The method according to claim 23, wherein said inserting step includes inserting the deployment device into a trocar placed within the body.

5 25. The method according to claim 24, wherein said affixing step includes threading a wire through the material to affix the material to the extended placement device.

26. The method according to claim 25, further including the step of removing the wire from the material after the material is placed at the
10 predetermined location.

27. A method of deploying a material into a patient by:

inserting the material, in a collapsed condition, in a cavity of a patient through an opening made into the cavity;

expanding the material into an uncollapsed condition; and placing
15 the material at a predetermined site.

28. A method as set forth in claim 27, further including the step of covering and patching over an opening in the cavity with the uncollapsed material.